

## SEQUENCE LISTING

SEQ ID NO:1

cDNA sequence of *FIE1*.

SEQ ID NO:2

Amino acid sequence of FIE1.

SEQ ID NO:3

cDNA sequence of *FIE3*.

SEQ ID NO:4

Amino acid sequence FIE3.

SEQ ID NO:5

Genomic sequence of *FIE3*.

SEQ ID NO:6

Genomic sequence of *FIE1*.

Seq. ID No: 2

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sequence Size      : 2136
Sequence Position: 1 - 2136

Translation Position: 1 - 2136:

Genetic Code       : Universal

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## SEQUENCE LISTING

<110> Fischer, Robert L.  
 Ohad, Nir  
 Kiyosue, Tomohiro  
 Yadegari, Ramin  
 Margossian, Linda  
 Harada, John  
 Goldberg, Robert B.  
 The Regents of the University of California

<120> Nucleic Acids That Control Seed and Fruit  
 Development in Plants

<130> 023070-086120US

<140> 09/177,249

<141> 1998-10-22

<150> US 09/071,838

<151> 1998-05-01

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<170> PatentIn Ver. 2.0

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 WD40/polycomb gene genomic sequence

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Gly Glu Glu Arg Thr Ser His Asn Tyr Thr Ile Pro Lys Arg	
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Cys Asp Thr Ser Asn Lys Gln Leu Tyr Ile Ser His Asn Leu	
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Asn Lys Glu Lys Phe Pro Asn Phe Ile Lys Asn Arg Ile	
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Lys Met Pro Ala Asn Arg Arg His Pro Asp Leu Ser Gly Ile Gln	
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Asn Leu Glu Lys Asn Asn Tyr Ile Tyr Asn Ile Lys Leu Glu	
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Cys Gln Thr Lys Tyr Asn Leu Phe Phe Leu Val Gln Arg Asn	
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Ile Gly Pro Asn Cys Phe Phe Phe Asn Ile Gln Pro Lys Lys Pro	
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Arg Leu Met His Ile Ser Arg Asn Arg Asn Gln Asn Phe Cys Ile Gln	
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Val Phe Phe His Tyr Ile Ser Pro Val Ser Glu Ile Lys	
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Ile Ile Tyr Leu Tyr Ile Thr Leu Thr Glu Lys Ile Arg Ala Glu	
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Ile His Ser Lys Cys Gly Tyr Ser Cys Phe Thr Pro Ser Ile Val	
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Leu Lys Pro Ala Arg Cys Arg Gly Trp Arg Arg Gln Gln Ile	
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Thr Phe Val Glu Asn Ala Lys Pro Thr Ser Ser Phe Gln Cys Leu Ile	
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Leu Phe Leu Arg Arg Ser Arg Leu Cys Ser Gly Ser	
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Arg Leu Cys Ser Arg Arg Cys Thr Ile Ile Ser Arg Cys	
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Thr Ile Ile Thr Lys Cys Gln Ala Ser Asn Cys Glu Ala Thr Thr	
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Tyr Phe Gln Asn Ile Asn His Ile Leu Tyr Ser Asn His Ser	
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Ser Asp Ser Val Ile Gly Lys Arg Gln Ile Tyr Tyr Leu Asn Gly Glu	
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Ala Leu Glu Leu Ser Ser Glu Glu Asp Glu Glu Asp Glu Glu Asp	
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Arg Phe Ile Trp Leu Val Phe Ala Leu His Met Phe Leu Ile Ile Asn	
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Val Ile Trp Phe Asp Pro Ser Gly Leu Ser            Lys Glu            Val Ser	
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Arg Arg Ile Tyr Trp Arg Thr Asp His Ser            Ser            Ala	
1875                      1880                      1885	
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Trp Glu Asn Arg Arg Ser Asp Trp Phe Phe Leu Pro Leu Tyr Leu Glu	
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Ser Gly Asn Phe Arg Ile Ile Leu Lys            Arg Phe Asn His Ser	
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Arg Val Thr His Leu Phe Glu Ser Lys            His Leu Phe Tyr Ser Ser	
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Lys Ser Met Leu Ala Val Lys Glu Thr Ser Ser Asn Phe Ser Ile Thr	
1940                      1945                      1950	
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Gln Gln Asp Leu Thr Ala Thr Pro Arg Tyr            Ala Val Ile Leu Tyr	
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Leu Glu Gln Ile Leu Thr Leu Tyr Lys Gln Lys Tyr Leu Cys            Phe	
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Leu            Leu Asn Arg Val Ser Thr Leu Leu Val Val Asp Trp Phe Ser	
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Tyr            Arg Tyr Ser Lys Lys Leu Lys Leu Ile Leu Asn Asp Phe Phe	
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Leu Ser Arg Lys Phe Arg Leu Arg Lys Phe Met Val Ser Cys Ala Val	
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Asp Asp Cys Glu Arg Arg Ser Glu Asp Trp Ser Ile Cys Gly Glu Ser	
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Cys Asn Ala Ile Leu Cys Tyr Thr Lys Thr Val Ser	
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Pro Val Thr Val Ser Gly Val Ser Ser Val Ile His Gln Ala Asp Val  
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                     20                    25                    30

Ser Gly

<210> 26  
 <211> 12  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 26  
 Trp Arg Arg Leu Val Ser Leu Gln Thr Tyr Met Asn  
     1                    5                    10

<210> 27  
 <211> 8  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 27  
 Leu Gly Tyr Glu Ile His Ile Phe  
     1                    5

<210> 28  
 <211> 25  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 28  
 Leu Cys Val Tyr Asp Arg Ser Ile Thr Phe Arg Val Glu Phe Ser Cys  
     1                    5                    10                    15

Asp Leu Leu Cys Tyr Ser Ser His Ala  
                     20                    25

<210> 29  
 <211> 24  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 29  
 Ser Ile Lys Leu Leu Phe Leu Asn Leu Ser Arg Lys Thr Met Arg Thr  
     1                    5                    10                    15



Met Val Arg Val Cys His Pro Asn  
20

<210> 30  
<211> 13  
<212> PRT  
<213> Arabidopsis sp.

<400> 30  
Lys Ser Lys Ser Lys Arg Arg Asp Phe Cys Ile Ser Arg  
1 5 10

<210> 31  
<211> 18  
<212> PRT  
<213> Arabidopsis sp.

<400> 31  
Glu Thr Phe Gly Cys Phe Asn Ile Leu Phe Ser Ser Val Cys Phe Ser  
1 5 10 15

Glu Asn

<210> 32  
<211> 5  
<212> PRT  
<213> Arabidopsis sp.

<400> 32  
Gly Glu Glu Arg Thr  
1 5

<210> 33  
<211> 10  
<212> PRT  
<213> Arabidopsis sp.

<400> 33  
Ser His Asn Tyr Thr Ile Pro Lys Arg Cys  
1 5 10

<210> 34  
<211> 13  
<212> PRT  
<213> Arabidopsis sp.

<400> 34  
Asp Thr Ser Asn Lys Gln Leu Tyr Ile Ser His Asn Leu  
1 5 10

<210> 35  
 <211> 7  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 35  
 Lys Glu Lys Phe Pro Asn Phe  
 1 5

<210> 36  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 36  
 Ile Lys Asn Arg Ile  
 1 5

<210> 37  
 <211> 6  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 37  
 Lys Met Pro Ala Asn Arg  
 1 5

<210> 38  
 <211> 12  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 38  
 Arg His Pro Asp Leu Ser Gly Ile Gln Asn Leu Glu  
 1 5 10

<210> 39  
 <211> 11  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 39  
 Tyr Ile Tyr Asn Ile Lys Leu Glu Leu Arg Leu  
 1 5 10

<210> 40  
 <211> 16  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 40

Asn Lys Ile Glu Asn Asn Ser Arg Phe Phe Cys Phe Cys Gln Thr Lys  
 1 5 10 15

&lt;210&gt; 41

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 41

Tyr Asn Leu Phe Phe Leu Val Gln Arg Asn  
 1 5 10

&lt;210&gt; 42

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 42

Ile Gly Pro Asn Cys Phe Phe Phe Asn Ile Gln Pro Lys Lys Pro Arg  
 1 5 10 15

Leu Met His Ile Ser Arg Asn Arg Asn Gln Asn Phe Cys Ile Gln Val  
 20 25 30

Phe

&lt;210&gt; 43

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 43

Phe His Tyr Ile  
 1

&lt;210&gt; 44

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 44

Ser Pro Val Ser Glu Ile  
 1 5

&lt;210&gt; 45

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 45

Lys Ile Ile Tyr Leu Tyr Ile Thr  
1 5

&lt;210&gt; 46

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 46

Leu Thr Glu Lys Ile Arg Ala Glu Ile His Ser Lys Cys Gly Tyr Ser  
1 5 10 15Cys Phe Thr Pro Ser Ile Val  
20

&lt;210&gt; 47

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 47

Leu Lys Pro Ala Arg Cys Arg Gly  
1 5

&lt;210&gt; 48

&lt;211&gt; 22

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 48

Trp Arg Arg Gln Gln Ile Thr Phe Val Glu Asn Ala Lys Pro Thr Ser  
1 5 10 15Ser Phe Gln Cys Leu Ile  
20

&lt;210&gt; 49

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 49

Phe Leu Arg Arg Ser Arg Leu Cys Ser  
1 5

&lt;210&gt; 50

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 50

Gly Ser Arg Leu Cys Ser  
1 5

&lt;210&gt; 51

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 51

Arg Arg Cys Thr Ile Ile Ser  
1 5

&lt;210&gt; 52

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 52

Arg Cys Thr Ile Ile Thr Lys Cys Gln Ala Ser Asn Cys  
1 5 10

&lt;210&gt; 53

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 53

Glu Ala Thr Thr Ile His Tyr Met Gly Leu His Gln Lys Ala Cys Val  
1 5 10 15Phe Phe Val Ser Tyr  
20

&lt;210&gt; 54

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 54

Phe Gln Asn Ile Asn His Ile Leu Tyr Ser Asn His Ser  
1 5 10

&lt;210&gt; 55

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 55

Cys Ile Tyr Thr Phe Leu  
1 5

<210> 56  
 <211> 74  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 56  
 His Cys Ser Ser Gln Leu Met Ala Glu Ser Asp Ser Val Ile Gly Lys  
   1                  5                  10                  15  
 Arg Gln Ile Tyr Tyr Leu Asn Gly Glu Ala Leu Glu Leu Ser Ser Glu  
                   20                  25                  30  
 Glu Asp Glu Glu Asp Glu Glu Glu Asp Glu Glu Glu Ile Lys Lys Glu  
           35                  40                  45  
 Lys Cys Glu Phe Ser Glu Asp Val Asp Arg Phe Ile Trp Leu Val Phe  
   50                  55                  60  
 Ala Leu His Met Phe Leu Ile Ile Asn Leu  
   65                  70

<210> 57  
 <211> 41  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 57  
 Ser Ile Phe Asn Lys Leu Leu Lys Lys Phe Ser Gly Arg Leu Gly Arg  
   1                  5                  10                  15  
 Thr Met Val Trp Met Ile Trp Ser Cys Gly Val Leu Ser Pro Ser Thr  
           20                  25                  30  
 Ser Lys Trp Met Phe Arg Thr Tyr Trp  
   35                  40

<210> 58  
 <211> 17  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 58  
 Gln Tyr Ser Asn Lys Asn Phe Ile Arg Arg Ser Ile Thr Phe Leu Leu  
   1                  5                  10                  15  
 Ile

<210> 59  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 59

Phe Leu Leu Phe Phe Val Val Arg Asn Val Leu Asn Phe Gln Ile  
 1 5 10 15

&lt;210&gt; 60

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 60

Cys Arg Lys Asp Thr Met Asn Ser Ser Leu Arg Met Met Glu Leu Leu  
 1 5 10 15

Val Arg Leu Leu Ile  
 20

&lt;210&gt; 61

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 61

His Pro Arg Gln  
 1

&lt;210&gt; 62

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 62

Leu Leu Leu Ser Arg Ile Leu Leu Ile Asp Val Ile Ala Val Val Ala  
 1 5 10 15

Trp

&lt;210&gt; 63

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 63

Ile Phe Leu Phe  
 1

&lt;210&gt; 64

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 64

Phe Ser His Lys Lys Gly Arg  
1 5

&lt;210&gt; 65

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 65

Ser Tyr Met Phe Leu Phe Tyr Phe Ile Ile Cys Phe Thr Asp Ile Arg  
1 5 10 15Leu Ser Tyr Ala  
20

&lt;210&gt; 66

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 66

Ile Arg Lys His  
1

&lt;210&gt; 67

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 67

Ile His Leu Asn Tyr Phe Val Ser Phe Thr Thr Leu Ile Tyr Lys Val  
1 5 10 15

Lys

&lt;210&gt; 68

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 68

Leu Asp Cys Phe Gly Leu Ser Glu Arg Arg Gln Ile  
1 5 10

&lt;210&gt; 69

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.



<400> 69  
 Thr Thr Met Gln  
 1

<210> 70  
 <211> 25  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 70  
 Ala Leu Leu Pro Gln Gly Leu Tyr Leu Ser Pro Ser Leu Ser Gln Phe  
 1 5 10 15  
 Phe Cys Leu Phe Leu Asn Tyr Val Tyr  
 20 25

<210> 71  
 <211> 8  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 71  
 Ile Gly Glu Glu Cys Asp Arg Ser  
 1 5

<210> 72  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 72  
 Ser Cys Asp Gly  
 1

<210> 73  
 <211> 28  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 73  
 Leu Tyr Ile Lys Gln Asp Cys Gly Leu Arg Ser Lys Gln His Tyr Val  
 1 5 10 15

Asp Ala Cys Arg Glu Gly Ser Leu Leu Glu Arg Asn  
 20 25

<210> 74  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 74

Asp Ile Trp Glu Lys Gln Val Lys Lys  
 1 5

&lt;210&gt; 75

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 75

Cys Ile Asn Ile Tyr Thr Tyr Thr Val Phe Leu Asp Tyr Ala Gly Ser  
 1 5 10 15

Gln Leu

&lt;210&gt; 76

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 76

Cys Cys Ile Lys His Thr Ser Gly Ala  
 1 5

&lt;210&gt; 77

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 77

Asp Val Pro Arg Asp Leu Gln Leu His Ala Arg Thr Arg Ser Met Tyr  
 1 5 10 15

Tyr Val Ile Arg Pro  
 20

&lt;210&gt; 78

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 78

Gln Asn Tyr Thr Lys Thr Gln Ser Gly Thr Leu Thr Tyr Val Val Ile  
 1 5 10 15

Ile Leu Met Thr Cys Met Leu Lys Thr His Glu Val Ser Tyr Met Cys  
 20 25 30

&lt;210&gt; 79

&lt;211&gt; 33

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 79

Trp Phe Tyr His Arg Leu Pro Lys Lys Tyr Leu Glu Lys Val Val Gly  
 1 5 10 15

Arg Ser Ala Lys Asn Arg Asp Ser Glu Asn Met Leu Val Ile Arg Leu  
 20 25 30

Leu

&lt;210&gt; 80

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 80

Arg Lys Gln Leu Val Glu Lys Leu Ser Phe Ile Ser Thr Thr His His  
 1 5 10 15

Ala Leu Ala Ser Gln Asn Val Asp Ser Asn Ala Leu Val  
 20 25

&lt;210&gt; 81

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 81

Leu Thr Lys Ile Ala Ala Arg Asn Ile Ala Gly Met Ser Phe Asn Phe  
 1 5 10 15

Ser

&lt;210&gt; 82

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 82

Ala Gly Arg Ser Met Arg Phe Asn Leu Asn Met Ser Leu Tyr Phe Leu  
 1 5 10 15

Phe Arg Cys Ser Lys Asp Cys Asn Asn Arg Phe Gly Gly Cys Asn Cys  
 20 25 30

Ala Ile Gly Gln Cys Thr Asn Arg Gln Cys Pro Cys Phe Ala Ala Asn  
 35 40 45

Arg Glu Cys Asp Pro Asp Leu Cys Arg Ser Cys Pro Leu Arg  
 50 55 60

<210> 83  
 <211> 66  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 83  
 His Phe His Phe Asn Ile Ser Leu Tyr Lys Phe Tyr Asn Gln Ser Asn  
     1                    5                    10                    15  
 Ser Asn Gln Lys Ser Tyr Lys Lys Asn Phe Ile Tyr Ser Cys Gly Asp  
                     20                    25                    30  
 Gly Thr Leu Gly Glu Thr Pro Val Gln Ile Gln Cys Lys Asn Met Gln  
                     35                    40                    45  
 Phe Leu Leu Gln Thr Asn Lys Lys Val Ile Asn Val Lys Ser Val Pro  
                     50                    55                    60  
 Lys Ile  
     65

<210> 84  
 <211> 20  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 84  
 Leu Tyr Glu Arg His Leu Thr Ile Ile Ser Arg Ile Leu Leu Asp Ser  
     1                    5                    10                    15  
 His Trp Lys Val  
                     20

<210> 85  
 <211> 41  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 85  
 Cys Ser Trp Met Gly Cys Ile Tyr Met Gly Lys Gln Ser Cys Lys Tyr  
     1                    5                    10                    15  
 Lys Asn Lys Phe Asn Ser Tyr Trp Cys Ile His Asn Thr Phe Phe Phe  
                     20                    25                    30  
 Leu Ile Met Phe Tyr Thr Leu Asp His  
                     35                    40

<210> 86  
 <211> 13  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 86

Ile Tyr Cys Val Ile Trp Phe Asp Pro Ser Gly Leu Ser  
 1 5 10

&lt;210&gt; 87

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 87

Val Ser Arg Arg Ile Tyr Trp Arg Thr Asp His Ser  
 1 5 10

&lt;210&gt; 88

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 88

Ala Trp Glu Asn Arg Arg Ser Asp Trp Phe Phe Leu Pro Leu Tyr Leu  
 1 5 10 15

Glu

&lt;210&gt; 89

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 89

Ser Gly Asn Phe Arg Ile Ile Leu Lys  
 1 5

&lt;210&gt; 90

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 90

Arg Phe Asn His Ser Arg Val Thr His Leu Phe Glu Ser Lys  
 1 5 10

&lt;210&gt; 91

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 91

His Leu Phe Tyr Ser Ser Lys Ser Met Leu Ala Val Lys Glu Thr Ser  
 1 5 10 15

Ser Asn Phe Ser Ile Thr Gln Gln Asp Leu Thr Ala Thr Pro Arg Tyr  
                   20                                  25                                  30

<210> 92  
 <211> 19  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 92  
 Ala Val Ile Leu Tyr Leu Glu Gln Ile Leu Thr Leu Tyr Lys Gln Lys  
           1                                  5                                  10                                  15

Tyr Leu Cys

<210> 93  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 93  
 Leu Asn Arg Val Ser Thr Leu Leu Val Val Asp Trp Phe Ser Tyr  
           1                                  5                                  10                                  15

<210> 94  
 <211> 50  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 94  
 Arg Tyr Ser Lys Lys Leu Lys Leu Ile Leu Asn Asp Phe Phe Leu Ser  
           1                                  5                                  10                                  15

Arg Lys Phe Arg Leu Arg Lys Phe Met Val Ser Cys Ala Val Asp Asp  
                                   20                                  25                                  30

Cys Glu Arg Arg Ser Glu Asp Trp Ser Ile Cys Gly Glu Ser Asn Arg  
                   35                                  40                                  45

Arg Arg  
           50

<210> 95  
 <211> 21  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 95  
 Gly Ala Phe Leu Arg Leu Leu Leu Trp Thr Arg Thr Cys Gly Leu Val  
           1                                  5                                  10                                  15

Ala Trp Ser Arg Thr  
                   20

<210> 96  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 96  
 Lys Asp Trp Cys Phe  
 1 5

<210> 97  
 <211> 28  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 97  
 Gly Ser Pro Ser Ser Ser Leu Val Phe Asp Leu Arg Arg Ser Ser Asn  
 1 5 10 15

Ser Ser Ser Pro Phe Phe Met Leu Trp Tyr Ile Asn  
 20 25

<210> 98  
 <211> 7  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 98  
 Cys Asn Ala Ile Leu Cys Tyr  
 1 5

<210> 99  
 <211> 52  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 99  
 Val Ser Val Leu Phe Val Leu Gly Cys Phe Val Cys Ile Ile Cys Val  
 1 5 10 15

Leu Thr Phe Lys Val Phe Phe Leu Tyr Phe Asn Leu Lys Thr Met Phe  
 20 25 30

Met Leu Leu Val Cys Ile Asp Leu Trp Lys Lys Lys Ala Leu His Asn  
 35 40 45

Phe Thr Phe Ile  
 50

<210> 100  
 <211> 33  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 100

Ser Ser Phe Ser Glu Lys Ser His Asn Thr Ser Leu Trp Tyr Val Met  
 1 5 10 15

Tyr Lys Asn Val Lys Ile Met Gly Phe Ile Ile Lys Lys Lys Tyr Trp  
 20 25 30

Leu

&lt;210&gt; 101

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 101

Met Lys Tyr Ser  
 1

&lt;210&gt; 102

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 102

Asn Phe Arg Tyr  
 1

&lt;210&gt; 103

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 103

Leu Val Trp Phe  
 1

&lt;210&gt; 104

&lt;211&gt; 8

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 104

Asn Val Phe Arg Asp Leu Ile Leu  
 1 5

&lt;210&gt; 105

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.



<400> 105

Tyr Met Glu Glu Ser Ser Thr Lys Trp Leu  
1 5 10

<210> 106

<211> 8

<212> PRT

<213> Arabidopsis sp.

<400> 106

Leu Thr Lys Gly Phe Thr Leu Met  
1 5

<210> 107

<211> 16

<212> PRT

<213> Arabidopsis sp.

<400> 107

His Leu Val Ser Lys Gln Ile Lys Thr Lys Lys Lys Lys Lys Ala Leu  
1 5 10 15

<210> 108

<211> 12

<212> PRT

<213> Arabidopsis sp.

<400> 108

Asn Pro Lys Val Thr Ile Phe Lys Lys Ser Lys Leu  
1 5 10

<210> 109

<211> 9

<212> PRT

<213> Arabidopsis sp.

<400> 109

Met Phe Gly Ile Ala Asn Asp Tyr Cys  
1 5

<210> 110

<211> 17

<212> PRT

<213> Arabidopsis sp.

<400> 110

Met Leu Asn Ile His Glu Asp Val Lys Asn Met Leu Asp Leu Trp Asn  
1 5 10 15

Arg

&lt;400&gt; 115

Thr Trp Leu Pro Ile Thr Val Leu Met Leu Leu Tyr Arg Ser Phe Leu  
 1 5 10 15

His Pro Leu Phe Leu His Ile Gln Glu Thr Val Ser Ser His Phe Leu  
 20 25 30

Ser Ser Ser Gln Cys Phe Asn Leu Cys Glu Leu Arg Trp Asn Met Lys  
 35 40 45

Lys His Lys Arg Thr Gln Glu Thr Ala Gly Pro  
 50 55

&lt;210&gt; 116

&lt;211&gt; 5

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 116

Phe Asp His Phe Lys  
 1 5

&lt;210&gt; 117

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 117

Ser Pro Leu Ala Phe Leu Ala Ser Ser Ser Leu Tyr Leu Ser Ser Phe  
 1 5 10 15

Phe His Val Ser Leu Ser Ile Pro Pro Gln Leu Arg Ser Pro Ser Pro  
 20 25 30

Ala Phe Pro Leu Leu Phe Thr Arg Gln Met Ser Glu Ser Tyr Thr Arg  
 35 40 45

Ser Cys Phe Ser Ser Ser Ser Ser Leu  
 50 55

&lt;210&gt; 118

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 118

Ser Thr Val Ser Gln Glu Asn Gln Asn Ala Leu Phe Ser Ile Pro Ile  
 1 5 10 15

Ser Thr Ser Ala Gly Ser Phe Ser Ser Ser Pro Lys Leu Val Pro Leu  
 20 25 30

Gly Ser Lys Glu Pro  
 35

<210> 119  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 119  
 Ala Arg Pro Cys Leu  
     1                    5

<210> 120  
 <211> 27  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 120  
 Ile Gln Thr Lys Thr Cys Phe Leu Arg His Met Lys Asp Gly Cys Trp  
     1                    5                    10                    15

Leu Gly Phe Cys Ser Phe Trp Gly Tyr Thr Lys  
                     20                    25

<210> 121  
 <211> 31  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 121  
 Cys Gly Leu Glu Ser Trp Leu Ser Leu Trp Leu Thr Thr Leu Tyr Met  
     1                    5                    10                    15

Gly Ser Thr Trp Arg Arg Gly Gly Pro Arg Glu Pro Leu Trp Gln  
                     20                    25                    30

<210> 122  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 122  
 Cys Gly Gly Gly Gly  
     1                    5

<210> 123  
 <211> 23  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 123  
 Lys Val Leu Trp Trp Trp Leu Arg Arg Ile Asp Leu Thr Ser Pro Phe  
     1                    5                    10                    15

Val Trp Arg Val Ser Ile Leu  
                     20

<210> 124  
 <211> 12  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 124  
 Thr Gly Val Cys Ile Thr Ser Val Leu Glu Leu Val  
 1 5 10

<210> 125  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 125  
 Arg Ser Ser Lys Gly Phe Trp Ile Leu  
 1 5

<210> 126  
 <211> 36  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 126  
 Ala Leu Arg Gly Arg Glu Lys Ala Val Asn His Val Phe Leu Met Ile  
 1 5 10 15  
 Cys Val Met Met Ile Met Cys Lys Ile Phe Asp Ile Leu Tyr Ser Ser  
 20 25 30  
 Leu Glu Cys Phe  
 35

<210> 127  
 <211> 13  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 127  
 Asp Phe Phe Ile Phe Ile Phe Tyr Phe Leu Leu Gly Ile  
 1 5 10

<210> 128  
 <211> 7  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 128  
 Pro Val Tyr Met Ser Gln Lys  
 1 5

<210> 129  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 129  
 Asn Ile Arg Lys Gln Lys Tyr Phe Ile  
     1                    5

<210> 130  
 <211> 14  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 130  
 Pro Leu Asn Ile Asn Leu Ser Leu Phe Ile Ile Ile Phe Leu  
     1                    5                    10

<210> 131  
 <211> 10  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 131  
 His Thr Leu Phe Lys Lys Asn Leu Glu Ile  
     1                    5                    10

<210> 132  
 <211> 8  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 132  
 Ile Val Lys Asn Ile Gly Phe Thr  
     1                    5

<210> 133  
 <211> 8  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 133  
 Met Arg Ile Ile Lys Phe Thr Asn  
     1                    5

<210> 134  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 134

Pro Tyr Ile Tyr Phe  
1 5

&lt;210&gt; 135

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 135

Arg Phe Lys Leu Ile Leu Phe Leu Pro Tyr Met His Asn Ile  
1 5 10

&lt;210&gt; 136

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 136

Leu Gly Met Asn Thr Asn Ile Tyr Asn Asp Ile Asn Ile Ser Leu Thr  
1 5 10 15Gly His Ser Lys Met Tyr Ile Leu Ile Tyr Gln His Phe Phe Ile Gly  
20 25 30Leu Leu Asn Gln Val Val Thr  
35

&lt;210&gt; 137

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 137

Val Asn Ala Phe Phe Phe Ile Ile Leu Tyr Met Asn Leu Asn Leu Ser  
1 5 10 15Cys Gln Thr Ser Ser Lys Pro Asn Ile Tyr Ile His Ile Val Leu Tyr  
20 25 30Phe Glu Asn  
35

&lt;210&gt; 138

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 138

Asn Phe Leu Lys Phe Pro Ile Leu Phe Ser Phe  
1 5 10

<210> 139  
 <211> 55  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 139  
 Ser Lys Gln Val Gln Ile Arg Phe Phe Gln Ile Ile Ile Phe Leu Asn  
   1                  5                  10                  15  
 Lys Val Phe Tyr Lys Lys Lys Ser Thr Ser Tyr Leu Lys Asn Pro Leu  
                   20                  25                  30  
 His Tyr Pro Phe His Gln His Gln Arg Arg Arg Glu Lys Lys Lys Arg  
           35                  40                  45  
 Arg Val Val Asn Gly Glu Gly  
       50                  55

<210> 140  
 <211> 6  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 140  
 Phe His Ser Lys His Ile  
   1                  5

<210> 141  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 141  
 Val Met Lys Ser Ile Tyr Phe Asn Cys Val Phe Met Ile Asp Gln  
   1                  5                  10                  15

<210> 142  
 <211> 19  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 142  
 His Leu Gly Leu Asn Phe Leu Val Ile Tyr Tyr Val Ile Arg Pro Met  
   1                  5                  10                  15

His Asp Pro

<210> 143  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 143

Asn Phe Tyr Phe

1

<210> 144

<211> 6

<212> PRT

<213> Arabidopsis sp.

<400> 144

Ile Cys Leu Gly Lys Pro

1

5

<210> 145

<211> 107

<212> PRT

<213> Arabidopsis sp.

<400> 145

Gly Phe Ala Thr Arg Thr Lys Ser Asp Lys Arg Ala Asn Arg Lys Gly  
1 5 10 15

Glu Ile Ser Ala Tyr Gln Gly Lys Arg His Leu Val Ala Leu Ile Phe  
20 25 30

Tyr Ser Leu Leu Tyr Val Phe Leu Lys Ile Lys Glu Arg Arg Gly Leu  
35 40 45

Asn Leu Ile Thr Ile Arg Phe Gln Arg Asp Val Lys Ile His Leu Ile  
50 55 60

Asn Ser Tyr Thr Leu Val Ile Ile Phe Lys Thr Lys Lys Arg Asn Phe  
65 70 75 80

Gln Thr Phe Lys Leu Lys Thr Glu Phe Arg Lys Cys Gln Arg Ile Asp  
85 90 95

Asn Asp Ile Gln Ile Cys Arg Val Ser Lys Thr  
100 105

<210> 146

<211> 10

<212> PRT

<213> Arabidopsis sp.

<400> 146

Asn Lys Lys Ile Ile Asn Ile Phe Ile Ile  
1 5 10

<210> 147

<211> 30

<212> PRT

<213> Arabidopsis sp.



&lt;400&gt; 147

Ser Trp Asn Leu Gly Tyr Lys Ile Lys Leu Lys Ile Ile Val Asp Phe  
 1 5 10 15

Phe Val Phe Val Lys Gln Asn Ser Asn Thr Ile Cys Phe Phe  
 20 25 30

&lt;210&gt; 148

&lt;211&gt; 5

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 148

Tyr Lys Glu Thr Lys  
 1 5

&lt;210&gt; 149

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 149

Val Gln Ile Val Phe Phe Leu Thr Phe Ser Gln Lys Ser Gln Asp  
 1 5 10 15

&lt;210&gt; 150

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 150

Cys Ile Tyr Gln Glu Ile Glu Ile Lys Thr Phe Val Phe Lys Tyr Ser  
 1 5 10 15

Ser Phe Thr Ile Tyr Arg Val Gln Phe Leu Lys Phe Lys Lys Ser Phe  
 20 25 30

Thr Tyr Ile Leu Leu Asp  
 35

&lt;210&gt; 151

&lt;211&gt; 147

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 151

Gln Arg Lys Phe Glu Leu Arg Tyr Ile Pro Ser Val Ala Thr His Ala  
 1 5 10 15

Ser His His Gln Ser Phe Asp Leu Asn Gln Pro Ala Ala Glu Asp Asp  
 20 25 30

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<400> 154
Met Val Arg His
1
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<210> 155  
 <211> 26  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 155  
 Ala Val Lys Lys Met Arg Lys Met Lys Lys Lys Met Arg Lys Lys Ser  
     1                    5                    10                    15  
 Arg Lys Lys Asn Ala Asn Phe Leu Lys Met  
                     20                    25

<210> 156  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 156  
 Thr Asp Leu Tyr Gly  
     1                    5

<210> 157  
 <211> 7  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 157  
 Phe Leu His Tyr Ile Cys Ser  
     1                    5

<210> 158  
 <211> 25  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 158  
 Leu Leu Ile Cys Ser Pro Tyr Leu Ile Asn Cys Ser Arg Asn Phe Gln  
     1                    5                    10                    15  
 Asp Gly Trp Ala Gly Leu Trp Phe Gly  
                     20                    25

<210> 159  
 <211> 32  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 159  
 Ser Gly Arg Ala Ala Cys Ser Arg Gln Val Pro Arg Ser Gly Cys Phe  
     1                    5                    10                    15  
 Gly His Ile Gly Asn Asn Ile Arg Ile Lys Thr Ser Tyr Val Asp Gln  
                     20                    25                    30

<210> 160  
 <211> 12  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 160  
 Leu Ser Cys Leu Phe Asn Phe Cys Cys Phe Ser Ser  
 1 5 10

<210> 161  
 <211> 10  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 161  
 Ile Phe Lys Ser Asn Val Gly Lys Ile Gln  
 1 5 10

<210> 162  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 162  
 Trp Asn Cys Trp  
 1

<210> 163  
 <211> 14  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 163  
 Phe Asp Ile Gln Asp Asn Asn Tyr Cys Phe Pro Gly Phe Cys  
 1 5 10

<210> 164  
 <211> 59  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 164  
 Thr Ser Leu Pro Ser Leu His Gly Asn Phe Glu Ser Phe Phe Phe Asn  
 1 5 10 15  
 Leu Ala Thr Lys Lys Gly Asp Asp His Thr Cys Phe Tyr Phe Ile Leu  
 20 25 30  
 Ser Phe Val Leu Gln Ile Phe Asp Cys His Met His Glu Lys Tyr Glu  
 35 40 45  
 Pro Glu Ser Arg Ser Val Ser Ile Lys Phe Ile  
 50 55

<210> 165  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 165  
 Ile Ile Leu Leu Val Ser Gln Pro Leu Tyr Ile Arg Leu Ser Asp  
     1                    5                    10                    15

<210> 166  
 <211> 56  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 166  
 Ile Ala Leu Ala Cys Gln Ser Glu Asp Lys Ser Ser Leu Phe Glu Asp  
     1                    5                    10                    15

Glu Asp Arg Gln Pro Cys Ser Glu His Cys Tyr Leu Lys Val Ser Ile  
                     20                    25                    30

Ser Leu Pro Leu Ser Leu Asn Phe Phe Val Tyr Ser Leu Ile Thr Phe  
                     35                    40                    45

Ile Ser Tyr Trp Phe Asn Ile Lys  
                     50                    55

<210> 167  
 <211> 50  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 167  
 Val Arg Ser Val Thr Glu Ala Asp His Val Met Asp Asn Asp Asn Ser  
     1                    5                    10                    15

Ile Ser Asn Lys Ile Val Val Ser Asp Pro Asn Asn Thr Met Trp Thr  
                     20                    25                    30

Pro Val Glu Lys Asp Leu Tyr Leu Lys Gly Ile Glu Ile Phe Gly Arg  
                     35                    40                    45

Asn Arg  
                     50

<210> 168  
 <211> 68  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 168  
 Lys Asn Lys Asn Arg Phe Asn Ala Leu Ile Tyr Ile Leu Thr Leu Tyr  
     1                    5                    10                    15

Ser Leu Ile Met Leu Val Arg Ser Cys Asp Val Ala Leu Asn Ile Leu  
                   20                  25                  30

Arg Gly Leu Lys Thr Cys Leu Glu Ile Tyr Asn Tyr Met Arg Glu Gln  
           35                  40                  45

Asp Gln Cys Thr Met Ser Leu Asp Leu Asn Lys Thr Thr Gln Arg His  
       50                  55                  60

Asn Gln Val His  
       65

<210> 169

<211> 23

<212> PRT

<213> Arabidopsis sp.

<400> 169

Lys His Met Lys Phe Pro Ile Cys Val Asp Gly Phe Ile Thr Gly Tyr  
       1                  5                  10                  15

Gln Lys Ser Ile Ser Lys Lys  
           20

<210> 170

<211> 22

<212> PRT

<213> Arabidopsis sp.

<400> 170

Val Gly Pro Gln Lys Ile Glu Thr Pro Lys Ile Cys Ser Leu Ser Ala  
       1                  5                  10                  15

Cys Phe Lys Glu Asn Asn  
           20

<210> 171

<211> 41

<212> PRT

<213> Arabidopsis sp.

<400> 171

Ala Leu His Thr Met His Leu Gln Val Lys Met Trp Thr Ala Met Pro  
       1                  5                  10                  15

Leu Phe Asn Ser Arg Lys Leu Leu Arg Glu Ile Leu Arg Val Cys His  
           20                  25                  30

Ser Ile Phe Pro Lys Pro Glu Asp Pro  
       35                  40

<210> 172  
 <211> 108  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 172  
 Val Cys Ile Phe Cys Ser Gly Ala Gln Arg Ile Ala Thr Ile Ala Leu  
   1                  5                  10                  15  
 Glu Asp Val Ile Val Gln Leu Ala Asn Ala Gln Ile Asp Asn Val Leu  
           20                  25                  30  
 Val Leu Leu Leu Ile Val Asn Ala Ile Gln Ile Phe Val Gly Val Val  
       35                  40                  45  
 Leu Leu Gly Asn Thr Phe Thr Ser Ile Ser Leu Tyr Thr Asn Ser Ile  
       50                  55                  60  
 Ile Lys Val Ile Gln Thr Lys Ser Leu Ile Lys Lys Thr Leu Tyr Ile  
       65                  70                  75                  80  
 Ala Val Glu Met Ala Leu Leu Val Arg His Gln Cys Lys Ser Asn Ala  
                   85                  90                  95  
 Arg Thr Cys Asn Ser Ser Phe Lys Pro Ile Lys Arg  
           100                  105

<210> 173  
 <211> 17  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 173  
 Ser Thr Ser Asn Pro Tyr Arg Lys Phe Lys Thr Asn Tyr Thr Lys Asp  
   1                  5                  10                  15

Ile

<210> 174  
 <211> 7  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 174  
 Leu Ser Phe Pro Val Phe Tyr  
   1                  5

<210> 175  
 <211> 39  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 175

Ile Leu Ile Gly Lys Ser Asp Val His Gly Trp Gly Ala Phe Thr Trp  
 1 5 10 15

Val Ser Asn His Val Asn Ile Arg Ile Ser Leu Ile Val Ile Gly Ala  
 20 25 30

Phe Ile Thr Leu Phe Phe Phe  
 35

&lt;210&gt; 176

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 176

Cys Phe Ile Leu  
 1

&lt;210&gt; 177

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 177

Thr Ile Lys Tyr Ile Val  
 1 5

&lt;210&gt; 178

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 178

Tyr Gly Leu Thr Arg Gln Asp Ser Leu Lys Lys Asn Glu Tyr Leu Gly  
 1 5 10 15

Glu Tyr Thr Gly Glu Leu Ile Thr His Asp Glu Ala Asn Glu Arg Gly  
 20 25 30

Arg Ile Glu Asp Arg Ile Gly Ser Ser Tyr Leu Phe Thr Leu Asn Asp  
 35 40 45

Gln Val Thr Ser Glu  
 50

&lt;210&gt; 179

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.



&lt;400&gt; 179

Ser Asn Val Leu Ile Ile Arg Gly Leu His Ile Tyr Ser Asn Gln Ser  
 1 5 10 15

Asn Ile Tyr Phe Thr Ala Arg Asn Arg Cys Ser Pro  
 20 25

&lt;210&gt; 180

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 180

Arg Lys Arg Val Gln Ile Ser Gln Ser Leu Ser Lys Thr  
 1 5 10

&lt;210&gt; 181

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 181

Leu Leu Arg Gln Gly Thr Lys Pro Leu Tyr Phe Ile Leu Asn Lys Tyr  
 1 5 10 15

&lt;210&gt; 182

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 182

His Tyr Thr Asn Lys Asn Thr Tyr Val Ser Phe Phe Ser  
 1 5 10

&lt;210&gt; 183

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 183

Ile Val Tyr Gln Leu Tyr Ser Ser Leu Ile Gly Phe His Ile Glu Asp  
 1 5 10 15

Ile Pro Arg Asn Ser Asn Ser Phe  
 20

&lt;210&gt; 184

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 184

Met Ile Phe Ser Cys Arg Glu Asn Leu Gly Tyr Glu Asn Leu Trp Phe  
 1 5 10 15

Arg Val Gln Leu Met Ile Val Arg Gly Asp Gln Arg Ile Gly Leu Phe  
 20 25 30

Ala Glu Arg Ala Ile Glu Glu Gly Glu Glu Leu Phe Phe Asp Tyr Cys  
 35 40 45

Tyr Gly Pro Glu His Ala Asp Trp Ser Arg Gly Arg Glu Pro Arg Lys  
 50 55 60

Thr Gly Ala Ser Lys Arg Ser Lys Glu Ala Arg Pro Ala Arg  
 65 70 75

&lt;210&gt; 185

&lt;211&gt; 37

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 185

Gly Glu Ala Ala Ile Gln Ala Val Leu Phe Leu Cys Tyr Gly Ile Ser  
 1 5 10 15

Ile Asn Asn Val Met Leu Phe Cys Val Thr Lys Pro Lys Leu Lys Phe  
 20 25 30

Leu Phe Tyr Leu Phe  
 35

&lt;210&gt; 186

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 186

Gly Val Leu Phe Val Ser Tyr Val Ser  
 1 5

&lt;210&gt; 187

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 187

Leu Ser Lys Phe Ser Phe Cys Ile Ser Ile  
 1 5 10

&lt;210&gt; 188

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 188

Lys Gln Cys Leu Cys Cys

1

5

&lt;210&gt; 189

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 189

Thr Phe Gly Lys Lys Lys Leu Cys Thr Thr Leu His Leu Phe Ser Leu

1

5

10

15

His Leu Ala Lys Asn His Ile Thr Gln Val Cys Gly Thr

20

25

&lt;210&gt; 190

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 190

Cys Thr Lys Met Ser Lys

1

5

&lt;210&gt; 191

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 191

Trp Val Leu Ser Leu Lys Lys Asn Ile Gly Tyr Glu

1

5

10

&lt;210&gt; 192

&lt;211&gt; 19

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 192

Ser Ile Val Arg Ile Leu Gly Ile Ser Ser Phe Gly Phe Lys Thr Phe

1

5

10

15

Phe Glu Ile

&lt;210&gt; 193

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 193

Phe Cys Ser Leu Leu Ser Asn Thr Trp Lys Asn His Gln Gln Ser Gly  
 1 5 10 15

Cys Ser Leu Arg Lys Val Leu Leu  
 20

&lt;210&gt; 194

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 194

Cys Lys Tyr Val Phe Asp Ala Ser Asn Ile  
 1 5 10

&lt;210&gt; 195

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 195

Tyr Leu Asn Lys  
 1

&lt;210&gt; 196

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 196

Lys Gln Lys Lys Arg Lys Lys Leu Phe Lys Ile Arg Lys  
 1 5 10

&lt;210&gt; 197

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 197

Leu Phe Ser Lys Asn Leu Asn Tyr Lys Leu Lys Cys Leu Glu Ser Arg  
 1 5 10 15

Thr Thr Ile Ala Lys Tyr Lys Cys  
 20

&lt;210&gt; 198

&lt;211&gt; 5

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

<400> 198  
 Ile Tyr Met Lys Met  
     1                    5

<210> 199  
 <211> 13  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 199  
 Lys Thr Cys Trp Ile Cys Gly Ile Val Asn Asp His Gly  
     1                    5                    10

<210> 200  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 200  
 Met Ala Gly Ser  
     1

<210> 201  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 201  
 Ile His Tyr Phe  
     1

<210> 202  
 <211> 48  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 202  
 Lys Ser Asn Phe Phe Ile Ser Ile Ile Cys Phe Lys Glu Lys Lys Asn  
     1                    5                    10                    15  
 Thr Arg Arg Leu Ser Ile Cys Arg Leu Cys Ser Ser Val Asn Leu Tyr  
             20                    25                    30  
 Phe Lys Thr Gly Gly Leu Phe Ile Thr Ile Ser Leu Asp Met Phe Leu  
     35                    40                    45

<210> 203  
 <211> 24  
 <212> PRT  
 <213> Arabidopsis sp.

&lt;400&gt; 203

Cys Arg Pro Lys Asn Arg Glu Ile Arg Lys Gly Thr Phe Val Val Ile  
 1 5 10 15

Val Thr Lys Gln Lys Ser Leu Tyr  
 20

&lt;210&gt; 204

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 204

Ile Ile Arg Lys Asp Glu Lys Ile Lys Pro Leu  
 1 5 10

&lt;210&gt; 205

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 205

Leu Asp Asp His Arg Arg Gly Cys Gln Leu Gln Ser  
 1 5 10

&lt;210&gt; 206

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 206

Cys Phe Tyr Ile Asp Leu Ser Tyr Ile Leu Cys Ser Phe Thr Phe Lys  
 1 5 10 15

Lys Gln Tyr His Pro Ile Phe Phe Leu Leu Leu Ser Val Ser Ile Phe  
 20 25 30

Ala Asn

&lt;210&gt; 207

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 207

Arg Asn Thr Lys Glu His Lys Lys Gln Leu Val Pro Asp Ser Thr Ile  
 1 5 10 15

Ser Asn Asp Leu His  
 20

<210> 208  
 <211> 106  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 208  
 Pro Pro Pro Pro Ser Ile Phe Pro Leu Ser Phe Thr Ser Leu Ser Leu  
 1 5 10 15  
 Tyr Leu Leu Asn Ser Gly His Arg Leu Arg Arg Phe Leu Cys Tyr Ser  
 20 25 30  
 Pro Gly Arg Cys Arg Ser Leu Ile His Asp Leu Val Ser His His Arg  
 35 40 45  
 Leu His Phe Asn Pro Gln Ser Leu Arg Lys Thr Arg Met Leu Cys Ser  
 50 55 60  
 Pro Phe Pro Ser Leu His Leu Leu Asp Arg Ser Leu His Arg Pro Ser  
 65 70 75 80  
 Leu Cys Leu Trp Asp Gln Lys Asn His Glu His Asp His Val Tyr Lys  
 85 90 95  
 Ser Arg Gln Lys Leu Val Ser Cys Asp Thr  
 100 105

<210> 209  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 209  
 Lys Met Asp Val Gly  
 1 5

<210> 210  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 210  
 Gly Phe Val Leu Phe Gly Ala Thr Arg Ser Asp Ala Asp Val Val  
 1 5 10 15

<210> 211  
 <211> 32  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 211  
 Gln His Tyr Ile Trp Gly Leu Arg Gly Gly Glu Val Val Arg Glu Ser  
 1 5 10 15

Arg Cys Gly Ser Asp Leu Trp Tyr Asn Val Val Val Glu Ala Lys Arg  
                   20                                  25                                  30

<210> 212  
 <211> 11  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 212  
 Gly Arg Lys Ser Cys Gly Gly Gly Tyr Gly Gly  
   1                                  5                                  10

<210> 213  
 <211> 42  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 213  
 Pro Pro His Ser Phe Gly Gly Ser Gln Phe Cys Glu Leu Val Tyr Val  
   1                                  5                                  10                                  15

Leu His Leu Cys Trp Asn Trp Phe Asn Glu Asp Leu Gln Arg Val Phe  
                                   20                                  25                                  30

Gly Phe Cys Glu Tyr Val Asp Phe Glu His  
                                   35                                  40

<210> 214  
 <211> 6  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 214  
 Glu Val Glu Lys Arg Leu  
   1                                  5

<210> 215  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 215  
 Ile Met Cys Phe  
   1

<210> 216  
 <211> 27  
 <212> PRT  
 <213> Arabidopsis sp.



&lt;400&gt; 216

Ser Cys Val Arg Tyr Leu Thr Tyr Tyr Thr His Leu Leu Asn Val Phe  
 1 5 10 15

Glu Ile Phe Leu Phe Leu Phe Ser Ile Ser Cys  
 20 25

&lt;210&gt; 217

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 217

Glu Phe Asn Pro Tyr Ile Cys His Lys Asn Ser Arg Ile Ser Glu Ser  
 1 5 10 15

Lys Asn Ile Leu Ser Lys Asn Asn His  
 20 25

&lt;210&gt; 218

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 218

Leu Tyr Phe Tyr Asn Thr Pro Phe Leu Arg Lys Thr Trp Arg Phe Asn  
 1 5 10 15

&lt;210&gt; 219

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 219

Lys Ile Ser Asp Leu Arg Arg Ser Phe Lys Cys Val  
 1 5 10

&lt;210&gt; 220

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 220

Leu Asn Leu Arg Ile Glu  
 1 5

&lt;210&gt; 221

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 221

Tyr Ser His Ile Tyr Ile Phe Glu Asp Leu Asn Ser Phe Cys Phe Phe  
 1 5 10 15

His Ile Cys Ile Ile Tyr Lys Leu Lys  
 20 25

&lt;210&gt; 222

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 222

Ile Leu Ile Tyr Ile Met Thr Leu Ile  
 1 5

&lt;210&gt; 223

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 223

Val Leu Pro Asp Thr Pro Lys Cys Ile Tyr  
 1 5 10

&lt;210&gt; 224

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 224

Ser Ile Asn Ile Phe Ser Leu Val Tyr  
 1 5

&lt;210&gt; 225

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 225

Thr Lys Leu Ser His Lys Tyr Glu Leu Thr Pro Phe Phe Leu  
 1 5 10

&lt;210&gt; 226

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 226

Ala Val Lys Arg Gln Ala Asn Pro Thr Ser Thr Tyr Ile  
 1 5 10

&lt;400&gt; 256

Thr Ala Gln Glu Ile Phe Arg Thr Val Gly Gln Asp Tyr Gly Leu Asp  
 1 5 10 15

Asp Leu Val Val Arg Arg Ala Leu Ala Lys Tyr Leu Glu Val Asp Val  
 20 25 30

Ser Asp Ile Leu Val Thr Ile Phe Glu  
 35 40

&lt;210&gt; 257

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 257

Lys Leu His Thr Ser Ile Asn Asn Phe Pro Ala Tyr Leu Ile Phe Val  
 1 5 10 15

Val Phe Arg Arg Glu Lys Cys Phe Lys Phe Ser Asn Leu Met  
 20 25 30

&lt;210&gt; 258

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 258

Glu Arg Tyr Asn Glu Leu Lys Leu Lys Asn Asp Gly Thr Ala Gly Glu  
 1 5 10 15

Ala Ser Asp Leu Thr Ser Lys Thr Ile Thr Thr Ala Phe Gln Asp Phe  
 20 25 30

Ala Asp Arg Arg His Cys Arg Arg Cys Met Val Thr Leu Asn Leu Ser  
 35 40 45

Phe Leu Ile  
 50

&lt;210&gt; 259

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 259

Pro Gln Lys Arg Glu Met Ile Ile His Val Phe Ile Leu Phe Tyr His  
 1 5 10 15

Leu Phe Tyr Arg Tyr Ser Ile Val Ile Cys Met Arg Ser Met Ser Pro  
 20 25 30

Ser Leu Asp Pro  
 35

<210> 260  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 260  
 Ala Leu Asn Ser Phe Lys Leu Phe Cys  
   1                  5

<210> 261  
 <211> 6  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 261  
 Phe His Asn Pro Tyr Ile  
   1                  5

<210> 262  
 <211> 50  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 262  
 Val Ile Asn Leu Ile Arg Leu Leu Trp Leu Val Arg Ala Lys Thr Asn  
   1                  5                  10                  15  
 Leu Val Cys Leu Arg Met Lys Ile Asp Asn His Ala Val Ser Ile Val  
                   20                  25                  30  
 Thr Ser Arg Ser Leu Ser Leu Ser Leu Ser Leu Ser Ile Phe Leu Ser  
           35                  40                  45  
 Ile Pro  
   1                  50

<210> 263  
 <211> 12  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 263  
 Leu Arg Leu Leu Val Thr Gly Leu Ile Leu Asn Arg  
   1                  5                  10

<210> 264  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 264  
 Gln Lys Leu Ile Met  
   1                  5

<210> 265  
 <211> 23  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 265  
 Trp Ile Met Ile Thr Leu Tyr Gln Thr Arg Leu Trp Ser Gln Ile Gln  
     1                    5                    10                    15  
 Thr Thr Leu Cys Gly Arg Leu  
                     20

<210> 266  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 266  
 Arg Arg Ile Phe Thr  
     1                    5

<210> 267  
 <211> 19  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 267  
 Lys Glu Leu Arg Tyr Leu Gly Glu Thr Gly Lys Lys Ile Lys Ile Asp  
     1                    5                    10                    15  
 Leu Met His

<210> 268  
 <211> 8  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 268  
 Tyr Ile Tyr Leu His Cys Ile Pro  
     1                    5

<210> 269  
 <211> 10  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 269  
 Leu Cys Trp Phe Ala Val Val Met Leu His  
     1                    5                    10

<210> 270  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 270  
 Thr Tyr Phe Gly Gly Leu Arg Arg Ala  
 1 5

<210> 271  
 <211> 15  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 271  
 Arg Phe Thr Ile Thr Cys Ala Asn Lys Ile Asn Val Leu Cys His  
 1 5 10 15

<210> 272  
 <211> 28  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 272  
 Thr Leu Thr Lys Leu His Lys Asp Thr Ile Arg Tyr Thr Asn Leu Cys  
 1 5 10 15

Arg Asn Tyr Ser His Asp Met Tyr Val Lys Asn Thr  
 20 25

<210> 273  
 <211> 95  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 273  
 Ser Phe Leu Tyr Val Leu Met Val Leu Ser Gln Val Thr Lys Lys Val  
 1 5 10 15

Ser Arg Lys Ser Ser Arg Ser Val Arg Lys Lys Ser Arg Leu Arg Lys  
 20 25 30

Tyr Ala Arg Tyr Pro Pro Ala Leu Lys Lys Thr Thr Ser Gly Glu Ala  
 35 40 45

Lys Phe Tyr Lys His Tyr Thr Pro Cys Thr Cys Lys Ser Lys Cys Gly  
 50 55 60

Gln Gln Cys Pro Cys Leu Thr His Glu Asn Cys Cys Glu Lys Tyr Cys  
 65 70 75 80

Gly Tyr Val Ile Gln Phe Phe Leu Ser Arg Lys Ile His Glu Ile  
 85 90 95

<210> 274  
 <211> 22  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 274  
 Phe Glu His Glu Phe Val Phe Phe Val Gln Val Leu Lys Gly Leu Gln  
     1                    5                    10                    15  
 Gln Ser Leu Trp Arg Met  
                     20

<210> 275  
 <211> 16  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 275  
 Leu Cys Asn Trp Pro Met His Lys Ser Thr Met Ser Leu Phe Cys Cys  
     1                    5                    10                    15

<210> 276  
 <211> 11  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 276  
 Met Arg Ser Arg Ser Leu Ser Glu Leu Ser Ser  
     1                    5                    10

<210> 277  
 <211> 13  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 277  
 Val Thr Leu Ser Leu Gln Tyr Leu Phe Ile Gln Ile Leu  
     1                    5                    10

<210> 278  
 <211> 6  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 278  
 Phe Lys Pro Lys Val Leu  
     1                    5

<210> 279  
 <211> 5  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 279

Lys Lys Leu Tyr Ile  
1 5

<210> 280

<211> 7

<212> PRT

<213> Arabidopsis sp.

<400> 280

Leu Trp Arg Trp His Ser Trp  
1 5

<210> 281

<211> 17

<212> PRT

<213> Arabidopsis sp.

<400> 281

Asp Thr Ser Ala Asn Pro Met Gln Glu His Ala Ile Pro Pro Ser Asn  
1 5 10 15

Gln

<210> 282

<211> 45

<212> PRT

<213> Arabidopsis sp.

<400> 282

Lys Gly Asn Gln Arg Gln Ile Arg Thr Glu Asn Leu Lys Leu Ile Ile  
1 5 10 15

Arg Lys Thr Phe Asn Tyr His Phe Pro Tyr Phe Thr Arg Phe Ser Leu  
20 25 30

Glu Ser Leu Met Phe Met Asp Gly Val His Leu His Gly  
35 40 45

<210> 283

<211> 5

<212> PRT

<213> Arabidopsis sp.

<400> 283

Leu Leu Val His Ser  
1 5

<210> 284

<211> 21

<212> PRT

<213> Arabidopsis sp.



&lt;400&gt; 284

His Phe Phe Phe Phe Asn Asn Val Leu Tyr Phe Arg Pro Leu Asn Ile  
 1 5 10 15

Leu Cys Asp Met Val  
 20

&lt;210&gt; 285

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 285

Pro Val Arg Thr Leu Leu Lys Arg Met Ser Ile Ser Glu Asn Ile Leu  
 1 5 10 15

Glu Asn

&lt;210&gt; 286

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 286

Ser Leu Met Met Lys Leu Met Ser Val Gly Glu  
 1 5 10

&lt;210&gt; 287

&lt;211&gt; 11

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 287

Lys Ile Gly Leu Val Leu Pro Thr Ser Leu Pro  
 1 5 10

&lt;210&gt; 288

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 288

Leu Gln Asn Asn Phe Glu Val Thr Phe  
 1 5

&lt;210&gt; 289

&lt;211&gt; 51

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 289

Ser Phe Ala Gly Tyr Thr Ser Ile Arg Ile Lys Val Thr Phe Ile Leu  
 1 5 10 15

Gln Leu Glu Ile Asp Ala Arg Arg Lys Gly Asn Glu Phe Lys Phe Leu  
 20 25 30

Asn His Ser Ala Arg Pro Asn Cys Tyr Ala Lys Val Leu Ser Arg Tyr  
 35 40 45

Thr Leu Ser  
 50

&lt;210&gt; 290

&lt;211&gt; 26

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 290

Thr Asn Thr Asn Ile Ile Gln Thr Lys Ile Leu Met Leu Val Ser Leu  
 1 5 10 15

Val Lys Ser Cys Ile Asn Phe Thr Arg Arg  
 20 25

&lt;210&gt; 291

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 291

Leu Val Phe Ile Leu Lys Ile Phe Gln Glu Thr Gln Thr His Phe Lys  
 1 5 10 15

&lt;210&gt; 292

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 292

Phe Phe Leu Val Glu Lys Ile  
 1 5

&lt;210&gt; 293

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis sp.

&lt;400&gt; 293

Val Thr Lys Ile Tyr Gly Phe Val Cys Ser  
 1 5 10

<210> 294  
 <211> 57  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 294  
 Glu Glu Ile Arg Gly Leu Val Tyr Leu Arg Arg Glu Gln Ser Lys Lys  
   1                  5                  10                  15  
 Val Arg Ser Phe Ser Ser Thr Thr Ala Met Asp Gln Asn Met Arg Ile  
                   20                  25                  30  
 Gly Arg Val Val Glu Asn Leu Glu Arg Leu Val Leu Leu Lys Gly Leu  
           35                  40                  45  
 Arg Lys Pro Val Gln Leu Val Ser Phe  
       50                  55

<210> 295  
 <211> 21  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 295  
 Ser Glu Glu Lys Gln Gln Phe Lys Gln Ser Phe Phe Tyr Val Met Val  
   1                  5                  10                  15  
 Tyr Gln Leu Ile Met  
                   20

<210> 296  
 <211> 66  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 296  
 Cys Tyr Phe Val Leu Leu Asn Gln Asn Leu Ser Phe Cys Phe Ile Cys  
   1                  5                  10                  15  
 Phe Arg Val Phe Cys Leu Tyr His Met Cys Leu Asn Phe Gln Ser Phe  
           20                  25                  30  
 Leu Phe Val Phe Gln Phe Lys Asn Asn Val Tyr Val Val Ser Leu His  
       35                  40                  45  
 Arg Pro Leu Glu Lys Lys Ser Phe Ala Gln Leu Tyr Ile Tyr Leu Val  
       50                  55                  60  
 Phe Ile  
   65

<210> 297  
 <211> 4  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 297  
 Arg Lys Ile Thr  
 1

<210> 298  
 <211> 18  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 298  
 His Lys Ser Val Val Arg Asn Val Gln Lys Cys Gln Asn Asn Gly Phe  
 1 5 10 15

Tyr His

<210> 299  
 <211> 9  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 299  
 Lys Lys Ile Leu Val Met Asn Glu Val  
 1 5

<210> 300  
 <211> 18  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 300  
 Val Leu Ala Arg Leu Val Leu Lys Arg Phe Ser Arg Phe Asn Phe Val  
 1 5 10 15

Val Tyr

<210> 301  
 <211> 32  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 301  
 Val Ile His Gly Arg Ile Ile Asn Lys Val Ala Val Ala Tyr Glu Arg  
 1 5 10 15

Phe Tyr Phe Asn Val Asn Met Tyr Leu Met His Leu Thr Phe Ser Ile  
 20 25 30

<210> 302  
 <211> 22  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 302  
 Thr Asn Lys Asn Lys Lys Lys Glu Lys Ser Ser Leu Lys Ser Glu Ser  
 1 5 10 15  
 Asn Tyr Phe Gln Lys Ile  
 20

<210> 303  
 <211> 21  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 303  
 Ile Ile Asn Leu Asn Val Trp Asn Arg Glu Arg Leu Leu Leu Asn Ile  
 1 5 10 15  
 Asn Ala Lys Tyr Thr  
 20

<210> 304  
 <211> 20  
 <212> PRT  
 <213> Arabidopsis sp.

<400> 304  
 Arg Cys Glu Lys His Val Gly Phe Val Glu Ser Leu Met Thr Thr Val  
 1 5 10 15  
 Lys Trp Arg Asp  
 20

<210> 305  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer Nir  
 Cla-73

<400> 305  
 ggcggacatc aaacctactt agc

23

<210> 306  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer cerln2

<400> 306

tgtaacatta aggcctttcc tttt

24

<210> 307

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
Nir-C-2-S-N

<400> 307

cggatcatcaa gtgagttatg aag

23

<210> 308

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer cerls659

<400> 308

ggtccaatcg gcaatgagt

19

<210> 309

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerlins10596n

<400> 309

gtccaatcgg caatgagtag ag

22

<210> 310

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer Nir  
La-4Cla-S-S

<400> 310

gtgtgcctaa cagtttccgc ac

22

<210> 311  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlns10265n

<400> 311  
 tctcggagat ggtgccatat cagc 24

<210> 312  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 fie3cds5'.seq

<400> 312  
 atgtcctctg gagagcagaa ggaagagtcg ttttacacgg 40

<210> 313  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlns10129n

<400> 313  
 tctggagagc agaaggaaga gtcg 24

<210> 314  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlns10030n

<400> 314  
 cgagtcattg acgtcaacag tg 22

<210> 315  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerlns9922n

<400> 315

ctcgcaaatg tgcagagtct tgtg

24

<210> 316

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerln1570

<400> 316

aggtcatcgc tatgaagttc

20

<210> 317

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerlns98f9511n

<400> 317

gctagttgtg gtatggacac

20

<210> 318

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerlns98f9311s

<400> 318

cacatggact gatgatccat c

21

<210> 319

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer  
cerls2099



<400> 319  
 gtaaccggttg gtttggtgat 20

<210> 320  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer Nir  
 E-4-N-N

<400> 320  
 ggtagtaag tcaatgatgg ttaag 25

<210> 321  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlins8795n

<400> 321  
 gcgataggta atcagagag 19

<210> 322  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlins8517n

<400> 322  
 ctgtaatcag gcaaacagcc 20

<210> 323  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:primer  
 cerlins98f8483s

<400> 323  
 cagccatgtc tgtcgatgga 20

40